

WHAT IS CLAIMED IS:

1/ A circuit-breaker comprising a control assembly having a "driving" first splined control shaft, said circuit-breaker also comprising an interrupting chamber having at least one moving arcing contact and also a "driven" second splined control shaft suitable for moving the moving contact between opening and closure positions, said circuit-breaker further comprising a synchronization assembly for synchronizing said driving and driven shafts, said synchronization assembly comprising two levers, each of which is provided with a splined ring suitable for co-operating with a corresponding shaft, and two connection rods, each of which is hinged at both of its ends to respective ones of said levers;

15 wherein one of said rings has a number of meshing elements that is different from the number of meshing elements on the splined shaft with which it co-operates, and wherein an adapter is interposed between said ring and said shaft, said adapter having internal meshing

20 elements suitable for co-operating with the meshing elements on the driving shaft, and external meshing elements suitable for co-operating with the meshing elements on said splined ring.

25 2/ A circuit-breaker according to claim 1, wherein the number of meshing elements on said splined ring and the number of meshing elements on the control shaft are mutually prime numbers.

30 3/ A circuit-breaker according to claim 1, wherein the absolute value of the difference between firstly the number of meshing elements on the control shaft and secondly the number of meshing elements on said splined ring is equal to 1.

35 4/ A circuit-breaker according to claim 1, wherein the smaller of the numbers of meshing elements on the control

shaft and of meshing elements on the splined ring is greater than twelve, and preferably greater than twenty six.

5 5/ A circuit-breaker according to claim 2, wherein the control shaft has thirty-six meshing elements while the splined ring has thirty-five meshing elements.

10 6/ A circuit-breaker according to claim 1, wherein the adapter is marked with an identification marker extending radially and/or angularly.

15 7/ A circuit-breaker according to claim 6, wherein the identification marker extends between an internal setback and an external meshing element, both of which are in alignment, on the link element.

20 8/ A circuit-breaker according to claim 6, wherein the identification marker is situated radially in register with another marker provided on the splined ring and/or on the control shaft.

25 9/ A circuit-breaker according to claim 1, wherein the other splined ring has the same number of meshing elements as the control shaft on which it is mounted, so as to co-operate directly with said control shaft.

10/ A method of assembling the circuit-breaker according to claim 1, the method comprising the following steps:

30 the other splined ring is mounted on its shaft; the inside periphery of the splined ring is disposed in the vicinity of the outside periphery of its control shaft, so that said inside and outside peripheries form a gap between them; and

35 the link element is inserted into said gap so as to cause it to co-operate both with the control shaft and with the first splined ring.

11/ A method of assembly according to claim 10, for assembling the circuit-breaker according to claim 8, wherein, before the link is inserted into the gap:

5 a hollow auxiliary member is used that has internal meshing elements that are identical to the internal meshing elements on the adapter, said auxiliary member having an external periphery such that it can be inserted into the gap without interfering with the splined ring,
10 said auxiliary member being provided with uniformly-distributed radial marks, the number of which is identical to the number of said internal meshing elements on the auxiliary member;

15 the auxiliary member is inserted into the gap; an "optimum" one of said radial marks is identified that corresponds to a free insertion position in which the adapter can be inserted freely into the gap;

20 said other marker corresponding to said free insertion position is formed on said splined ring and/or on the shaft;

said auxiliary member is removed from the gap; and the adapter is inserted into said gap, in said optimum insertion position.

25 12/ A method of assembly according to claim 11, wherein, while the adapter is being inserted into the gap, the identification marker on the adapter is aligned with said other marker on the splined ring and/or on the shaft.

30 13/ A method of assembly according to claim 11, wherein each radial mark on the auxiliary member extends from an internal setback in said auxiliary member, between two adjacent meshing elements.

35 14/ A method of assembly according to claim 13, wherein the optimum radial mark is identified, which optimum mark is centered optimally relative to a facing setback in the

splined ring, and/or relative to a facing meshing element on the shaft.

15/ An auxiliary member for implementing the method of
5 assembly according to claim 10, said auxiliary member
being hollow and having internal meshing elements
provided on its inside periphery, as well as uniformly-
distributed radial marks, of which the number is
identical to the number of said internal meshing
10 elements.

16/ An auxiliary member according to claim 15, wherein
each radial mark extends from a setback provided between
two internal meshing elements.

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17/ An auxiliary member according to claim 15, having a
smooth outside periphery, in particular a circularly
cylindrical outside periphery.